



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/445,843	06/22/2001	Sverker Lindbo	639321.0004	1438
7590	12/16/2004			EXAMINER
Anita Lomartra Cummings & Lockwood PO Box 1960 New Haven, CT 06509-9958			PARTON, KEVIN S	
			ART UNIT	PAPER NUMBER
			2153	

DATE MAILED: 12/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/445,843	LINDBO, SVERKER <i>SP</i>	
	Examiner	Art Unit	
	Kevin Parton	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 20 September 2004.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-43 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-43 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 07/12.

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 09/20/2004 have been considered but are moot in view of the new ground(s) of rejection. Please see the new grounds of rejection below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeSimone et al. (USPN 5,787,470) in view of Greenwood et al. (USPN 5,568,181).

4. Regarding claim 1, DeSimone et al. (USPN 5,787,470) teach a system for caching internet information to increase web performance with means for:

- a. Deriving information sent to an end user from an Internet content provider based upon an information request from the end user (figure 1; column 1, lines 30-35).

Although the system disclosed by DeSimone et al. (USPN 5,787,470) shows substantial features of the claimed invention, it fails to disclose means for:

- a. Distributing the information to a set of geographically distributed cache servers.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance with means for:

- a. Distributing the information to a set of geographically distributed cache servers (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Note that the distribution of data can be based on the location of the users and their cultural and linguistic characteristics.

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the distribution of data to geographically separate cache servers. Geographically distributing data allows for the least amount of physical distance between the end user and the cache thus benefiting the system by reducing retrieval time.

5. Regarding claim 2, DeSimone et al. (USPN 5,787,470) teach all the limitations as applied to claim 1. They further teach means wherein the deriving step is performed in connection with a cache server serving the end user, the end user being located in a geographical region served by the a cache server (figure 1; column 1, lines 30-35).

6. Regarding claim 3, DeSimone et al. (USPN 5,787,470) teach all the limitations as applied to claim 2. They further teach means comprising storing the information in the cache server (figure 1; column 1, lines 30-35).

7. Regarding claim 4, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 3) shows substantial features of the claimed invention, it fails to disclose means for storing the information in the cache server only if the content provider is located outside the region.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance by distributing cached data wherein storing the information in the cache server only if the content provider is located outside the region (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48). Note that in the reference, the distribution of data can be done according to any set of rules.

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the distribution of data only if the content provider is located outside the region. This allows for the most pertinent information to be cached and benefits the system by only using memory and cache function for data that can enjoy an appreciable increase in retrieval speed by being cached.

8. Regarding claim 5, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 3) shows substantial features of the claimed invention, it

fails to disclose: means wherein storing the information in the cache server only if the content provider is located inside the region.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance by distributing cached data wherein storing the information in the cache server only if the content provider is located inside the region (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the distribution of data only if the content provider is located inside the region. This allows for the most pertinent information to be cached and benefits the system by only using memory and cache function for data that would most likely be of direct interest to the end user.

9. Regarding claim 6, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 2) shows substantial features of the claimed invention, it fails to disclose means for performing the distributing step only if the content provider is located outside the region.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance by distributing cached data with means for performing the distributing step only if the content provider is located outside the region (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the distribution of data only if the content provider is located outside the region. This allows for the most pertinent information to be cached and benefits the system by only using memory and cache function for data that can enjoy an appreciable increase in retrieval speed by being cached.

10. Regarding claim 7, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 2) shows substantial features of the claimed invention, it fails to disclose means for performing the distributing step only if the content provider is located inside the region.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance by distributing cached data with means for performing the distributing step only if the content provider is located inside the region (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the distribution of data only if the content provider is located inside the region. This allows for the most pertinent information to be cached and benefits the system by only using memory and cache function for data that can enjoy an appreciable increase in retrieval speed by being cached.

11. Regarding claim 8, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 1) shows substantial features of the claimed invention, it fails to disclose means for distributing the information to the set of geographically distributed cache servers using multicast communication.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance by distributing cached information with means for distributing the information to the set of geographically distributed cache servers using multicast communications (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the use of multicast communications for the distribution of information. According to Greenwood et al.

(USPN 5,568,181) multicast communication benefits the system by “ensuring accurate and synchronized delivery” to all destination servers (column 5, lines 17-18).

12. Regarding claim 9, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 8) shows substantial features of the claimed invention, it fails to disclose means for distributing the information to the set of geographically distributed cache servers using a satellite link.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance by distributing cached information with means for distributing the information to the set of geographically distributed cache servers using a satellite link (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the use of satellite communications to distribute information. This provides the opportunity to distribute the information more easily overseas and to widely disparate areas. This benefits the system by allowing for the exchange of information regardless of the availability of telephone or other lines greatly increasing the geographic reach.

13. Regarding claim 10, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 1) shows substantial features of the claimed invention, it

fails to disclose means for only distributing the information based upon the outcome of a rule determining, for each derived piece of information, whether or not the derived piece of information is to be distributed to the set of geographically distributed cache servers.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for distributing cached information for increased web performance with means for only distributing the information based upon the outcome of a rule determining, for each derived piece of information, whether or not the derived piece of information is to be distributed to the set of geographically distributed cache servers (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone by employing the use of rules to determine which content should be distributed. This benefits the system by allowing for configuration and adaptation of information types that will be more quickly available to local users.

14. Regarding claim 11, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 1) shows substantial features of the claimed invention, it fails to disclose means wherein the set of geographically distributed cache servers serve different geographical regions.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance by distributing cached information wherein the set of geographically distributed cache servers serve different geographical regions (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the use of geographically distributed cache servers. Although the location of the cache servers is not explicitly stated in DeSimone et al. (USPN 5,787,470), it is advantageous to the system to distribute these cache servers geographically. By placing the cache geographically close to its intended users, the data transmission time is decreased thus improving overall performance.

15. Regarding claim 12, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 1) shows substantial features of the claimed invention, it fails to disclose means wherein the set of geographically distributed cache servers are distributed within a linguistically or culturally defined area.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance by distributing cached information wherein the set of geographically distributed cache servers are distributed within a linguistically or culturally defined area (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the distribution of data according to cultural and linguistic boundaries. This benefits the system by caching data that is most likely to be of interest to the end user and avoiding the wasting of space of sending information that may not be comprehended by a majority of the end users.

16. Regarding claim 13, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 11) shows substantial features of the claimed invention, it fails to disclose means wherein the set of geographically distributed cache servers are distributed within a linguistically or culturally defined area encompassing the regions.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance by distributing cached information wherein the set of geographically distributed cache servers are distributed within a linguistically or

culturally defined area encompassing the regions (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the distribution of data according to cultural and linguistic boundaries. This benefits the system by caching data that is most likely to be of interest to the end user and avoiding the wasting of space of sending information that may not be comprehended by a majority of the end users.

17. Regarding claim 14, DeSimone et al. (USPN 5,787,470) teach a system comprising:

- a. A set of distributed cache servers (figure 1). Note that each server has a cache and would thus be distributed.
- b. Means for deriving Internet information derived in connection with the operation of one of the cache servers (figure 1; column 1, lines 30-35).
- c. Means for distributing the derived information to essentially all of the cache servers (figure 1).

Although the system disclosed by DeSimone et al. (USPN 5,787,470) shows substantial features of the claimed invention, it fails to disclose geographically distributed cache servers and means wherein each cache server serves a different region wherein each region has a common relation.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance with geographically distributed cache servers and means wherein each cache server serves a different region wherein each region has a common relation (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the geographical distribution of data. The purpose of the invention is to increase the performance for end users by putting information on a cache directly connected to them in their route to retrieve data. Geographically distributing data allows for the least amount of physical distance between the end user and the cache thus benefiting the system by further reducing retrieval time.

18. Regarding claim 15, DeSimone et al. (USPN 5,787,470) teach all the limitations as applied to claim 14. They further teach means wherein the deriving means are arranged to derive the information in connection with the sending of the information from an Internet content provider to an end user as a result off a specific information request by the end user, the end user being located in a geographical region served by the one of the cache servers (figure 1; column 1, lines 30-35).

19. Regarding claim 16, DeSimone et al. (USPN 5,787,470) teach all the limitations as applied to claim 15. They further teach means wherein one of the cache servers is arranged to store the information (figure 1; column 1, lines 30-35).

20. Regarding claim 17, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 16) shows substantial features of the claimed invention, it fails to disclose means wherein one of the cache servers is arranged to store the information only if the content provider is located outside the region.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance by distributing cached data wherein one of the cache servers is arranged to store the information only if the content provider is located outside the region (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the distribution of data only if the content provider is located outside the region. This allows for the most pertinent information to be cached and benefits the system by only using memory and cache function for data that can enjoy an appreciable increase in retrieval speed by being cached.

21. Regarding claim 18, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 16) shows substantial features of the claimed invention, it fails to disclose means wherein one of the cache servers is arranged to store the information only if the content provider is located inside the region.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance by distributing cached data wherein one of the cache servers is arranged to store the information only if the content provider is located inside the region (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the distribution of data only if the content provider is located inside the region. This allows for the most pertinent information to be cached and benefits the system by only using memory and cache function for data that would most likely be of direct interest to the end user.

22. Regarding claim 19, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 15) shows substantial features of the claimed invention, it fails to disclose means wherein the distributing means are arranged to distribute the information to the set of caches servers only if the content provider is located outside the region.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance by distributing cached data wherein the distributing means are arranged to distribute the information to the set of caches servers only if the content provider is located outside the region (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the distribution of data only if the content provider is located outside the region. This allows for the most pertinent information to be cached and benefits the system by only using memory and cache function for data that can enjoy an appreciable increase in retrieval speed by being cached.

23. Regarding claim 20, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 15) shows substantial features of the claimed invention, it fails to disclose means wherein the distributing means are arranged to distribute the information to the set of caches servers only if the content provider is located inside the region.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance by distributing cached data with means wherein the distributing means are arranged to distribute the information to the set of caches servers only if the content provider is located inside the region (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the distribution of data only if the content provider is located inside the region. This allows for the most pertinent information to be cached and benefits the system by only using memory and cache function for data that can enjoy an appreciable increase in retrieval speed by being cached.

24. Regarding claim 21, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 14) shows substantial features of the claimed invention, it fails to disclose means wherein the distributing means are arranged to distribute the information to the set of cache servers using multicast communication.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance by distributing cached information with means wherein the distributing means are arranged to distribute the information to the set of cache servers using multicast communication (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the use of multicast communications for the distribution of information. According to Greenwood et al. (USPN 5,568,181) multicast communication benefits the system by "ensuring accurate and synchronized delivery" to all destination servers (column 5, lines 17-18).

25. Regarding claim 22, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 21) shows substantial features of the claimed invention, it fails to disclose means wherein the distributing means are arranged to distribute the information to the set cache servers via a satellite link.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance by distributing cached information with means wherein the distributing means are arranged to distribute the information to the set cache servers via a satellite link (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the use of satellite communications to distribute information. This provides the opportunity to distribute the information more easily overseas and to widely disparate areas. This benefits the system by allowing for the exchange of information regardless of the availability of telephone or other lines greatly increasing the geographic reach.

26. Regarding claim 23, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 1) shows substantial features of the claimed invention, it fails to disclose processing means for determining whether or not the derived information is to be distributed to the set of cache servers.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for distributing cached information for increased web performance with processing means for determining whether or not the derived information is to be distributed to the set of cache servers (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone by employing the use of rules to determine which content should

be distributed. This benefits the system by allowing for configuration and adaptation of information types that will be more quickly available to local users.

27. Regarding claim 24, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 14) shows substantial features of the claimed invention, it fails to disclose means wherein the set of geographically distributed cache servers are arranged to serve different geographical regions.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance by distributing cached information wherein the set of geographically distributed cache servers are arranged to serve different geographical regions (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the use of geographically distributed cache servers. Although the location of the cache servers is not explicitly stated in DeSimone et al. (USPN 5,787,470), it is advantageous to the system to distribute these cache servers geographically. By placing the cache geographically close to its intended users, the data transmission time is decreased thus improving overall performance.

28. Regarding claim 25, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 14) shows substantial features of the claimed invention, it fails to disclose means wherein the set of geographically distributed cache servers are distributed within a linguistically or culturally defined area.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance by distributing cached information wherein the set of geographically distributed cache servers are distributed within a linguistically or culturally defined area (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the distribution of data according to cultural and linguistic boundaries. This benefits the system by caching data that is most likely to be of interest to the end user and avoiding the wasting of space of sending information that may not be comprehended by a majority of the end users.

29. Regarding claim 26, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 24) shows substantial features of the claimed invention, it fails to disclose means wherein the set of geographically distributed cache servers are distributed within a linguistically or culturally defined area encompassing the regions.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance by distributing cached information wherein the set of geographically distributed cache servers are distributed within a linguistically or culturally defined area encompassing the regions (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the distribution of data according to cultural and linguistic boundaries. This benefits the system by caching data that is most likely to be of interest to the end user and avoiding the wasting of space of sending information that may not be comprehended by a majority of the end users.

30. Regarding claim 27, DeSimone et al. (USPN 5,787,470) teach a cache server in a geographic region generally used to service users in the region with means for:

- a. Deriving information sent by an Internet content provider to an end user located within the region as a result of an information request made by the end user (figure 1; column 1, lines 30-35).

Although the system disclosed by DeSimone et al. (USPN 5,787,470) shows substantial features of the claimed invention, it fails to disclose means for distributing

the information to a set of geographically distributed cache servers, the servers preferably serving substantially different local geographical regions within an area having a common relation.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance by distributing the information to a set of geographically distributed cache servers, the servers preferably serving substantially different local geographical regions within an area having a common relation (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the geographical distribution of data. The purpose of the invention is to increase the performance for end users by putting information on a cache directly connected to them in their route to retrieve data. Geographically distributing data allows for the least amount of physical distance between the end user and the cache thus benefiting the system by further reducing retrieval time.

31. Regarding claim 28, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 27) shows substantial features of the claimed invention,

it fails to disclose means wherein the set of geographically distributed cache servers are distributed within a linguistically or culturally defined area.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance by distributing cached information wherein the set of geographically distributed cache servers are distributed within a linguistically or culturally defined area (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the distribution of data according to cultural and linguistic boundaries. This benefits the system by caching data that is most likely to be of interest to the end user and avoiding the wasting of space of sending information that may not be comprehended by a majority of the end users.

32. Regarding claim 29, DeSimone et al. (USPN 5,787,470) teach all the limitations as applied to claim 27. They further teach processing means for determining whether or not the derived information is to be cached in the server (figure 1; column 1, lines 51-55).

33. Regarding claim 30, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 1) shows substantial features of the claimed invention, it

fails to disclose means for determining whether or not a specific piece of derived information is to be distributed to the set of geographically distributed cache servers.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for distributing cached information for increased web performance with means for determining whether or not a specific piece of derived information is to be distributed to the set of geographically distributed cache servers (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone by employing the use of rules to determine which content should be distributed. This benefits the system by allowing for configuration and adaptation of information types that will be more quickly available to local users.

34. Regarding claim 31, DeSimone et al. (USPN 5,787,470) teach all the limitations as applied to claim 29. They further teach means wherein decisions made by the processing means is based upon whether or not the content provider is located within the region (column 1, lines 50-55).

35. Regarding claim 32, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 29) shows substantial features of the claimed invention, it fails to disclose means wherein the processing means is arranged to instruct the

server to not cache the information and not distribute the information to the set of geographically distributed cache servers if the end user and the Internet content provider are both located within the same region as the server

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance by distributing cached data wherein the processing means is arranged to instruct the server to not cache the information and not distribute the information to the set of geographically distributed cache servers if the end user and the Internet content provider are both located within the same region as the server (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48). Note that in the reference, the distribution of data can be done according to any set of rules.

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the distribution of data only if the content provider is located outside the region. This allows for the most pertinent information to be cached and benefits the system by only using memory and cache function for data that can enjoy an appreciable increase in retrieval speed by being cached.

36. Regarding claim 33, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 29) shows substantial features of the claimed invention,

it fails to disclose means wherein the processing means is arranged to instruct the server to cache the information and to not distribute the information to the set of geographically distributed cache servers if the Internet content provider is located within the same region as the server.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance by distributing cached data wherein the processing means is arranged to instruct the server to cache the information and to not distribute the information to the set of geographically distributed cache servers if the Internet content provider is located within the same region as the server (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48). Note that in the reference, the distribution of data can be done according to any set of rules.

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the distribution of data only if the content provider is located inside the region. This allows for the most pertinent information to be cached and benefits the system by only using memory and cache function for data that would most likely be of direct interest to the end user.

37. Regarding claim 34, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 29) shows substantial features of the claimed invention,

it fails to disclose means wherein the processing means is arranged to instruct the server to not cache the information but instead only distribute the information to the set of geographically distributed cache servers if the Internet content provider is located within the same region as the server.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance by distributing cached data wherein the processing means is arranged to instruct the server to not cache the information but instead only distribute the information to the set of geographically distributed cache servers if the Internet content provider is located within the same region as the server (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48). Note that in the reference, the distribution of data can be done according to any set of rules.

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the distribution of data only if the content provider is located inside the region. This allows for the most pertinent information to be cached and benefits the system by only using memory and cache function for data that would most likely be of direct interest to the end user.

38. Regarding claim 35, DeSimone et al. (USPN 5,787,470) teach a system for caching content in a distributed computing network with means for:

- a. Receiving an information request seeking a content, the information request being from an end user to an information provider (column 1, lines 50-55).
- b. Determining if the content is locally cached (column 1, lines 50-55).
- c. Providing the information request to the content provider if the content is not locally cached (column 1, lines 40-44).
- d. Deriving the content sent from the content provider in response to the information request (column 1, lines 50-55). Note that this is the basis of information retrieval on the Internet.

Although the system disclosed by DeSimone et al. (USPN 5,787,470) shows substantial features of the claimed invention, it fails to disclose means for distributing the content to a set of cache server, each cache server serving a substantially different region wherein each region has a common relation.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for distributing Internet content with means for distributing the content to a set of cache servers, each cache server serving a substantially different region wherein each region has a common relation (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of

modifying DeSimone et al. (USPN 5,787,470) by employing the geographical distribution of data. The purpose of the invention is to increase the performance for end users by putting information on a cache directly connected to them in their route to retrieve data. Geographically distributing data allows for the least amount of physical distance between the end user and the cache thus benefiting the system by further reducing retrieval time.

39. Regarding claim 36, DeSimone et al. (USPN 5,787,470) teach all the limitations as applied to claim 35. They further teach means for applying at least one rule to the distribution of the content (column 1, lines 50-55). Rules are used for when items are cached.

40. Regarding claim 37, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 36) shows substantial features of the claimed invention, it fails to disclose means for caching only content with a specific communication format.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470).

A person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the use of a rule to cache only data of a particular communication type. For instance, only certain types of communicated data such as video or audio that require large download times, could be cached. This would benefit the system by allowing for faster download of the most time intensive data types.

41. Regarding claim 38, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 36) shows substantial features of the claimed invention, it fails to disclose means for caching only content from ".com" and ".org" address extensions.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470).

A person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the filtering of cached content based on the web address extension. This benefits the system by stopping the caching of content types that may be known to be of little interest to users.

42. Regarding claim 39, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 36) shows substantial features of the claimed invention, it fails to disclose means for caching only content stored outside the region.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for improving web performance by distributing cached data with means for caching only content stored outside the region (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48). Note that in the reference, the distribution of data can be done according to any set of rules.

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the distribution of data only if the content provider is located inside the region. This allows for the most pertinent information to be cached and benefits the system by only using memory and cache function for data that would most likely be of direct interest to the end user.

43. Regarding claim 40, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 35) shows substantial features of the claimed invention, it fails to disclose means wherein the common relation is a culturally defined area.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) disclose a system for distributing Internet content geographically wherein the common relation is a culturally defined area (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the use of a culturally defined area to determine where information should be cached. This benefits the system by allowing the most pertinent information to be more quickly accessible to the users that need to access it.

44. Regarding claim 41, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 35) shows substantial features of the claimed invention, it fails to disclose means wherein the common relation is a linguistically defined group of end users.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) disclose a system for distributing Internet content geographically wherein the common relation is a linguistically defined group of end users (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the use of a linguistically defined group to determine where information should be cached. This benefits the system by avoiding wasted cache space on information that is not in the language of the end user.

45. Regarding claim 42, although the system disclosed by DeSimone et al. (USPN 5,787,470) (as applied to claim 35) shows substantial features of the claimed invention, it fails to disclose means wherein the common relation is a location within a national boundary.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) disclose a system for distributing Internet content geographically wherein the common relation is a location within a national boundary (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the use of national borders to determine where information should be cached. This benefits the system because when little else is known about a group of users, their nationality can help to filter a large portion of information and ensure that some important information is cached locally.

46. Regarding claim 43, DeSimone et al. (USPN 5,787,470) teach a system for caching content in a distributed computing network with means for:

- a. Receiving a message (column 1, lines 50-55).
- b. Determining if the message is an information request seeking a content, the information request being from an end user to an information provider (column 1, lines 50-55).
- c. Determining if the content is locally cached when the message is an information request (column 1, lines 50-55).
- d. Providing the content to the end user if the content is locally cached (column 1, lines 50-55).

- e. Providing the information request to the content provider if the content is not locally cached (column 1, lines 40-44).
- f. Monitoring the content sent from the content provider in response to the information request (column 1, lines 50-55)

Although the system disclosed by DeSimone et al. (USPN 5,787,470) shows substantial features of the claimed invention, it fails to disclose means for:

- a. Sending the message to the distributed computing network without effect if the message is not an information request.
- b. Distributing the content to a set of cache servers, each cache server serving a substantially different region wherein each region has a common relation.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by DeSimone et al. (USPN 5,787,470), as evidenced by Greenwood et al. (USPN 5,568,181).

In an analogous art, Greenwood et al. (USPN 5,568,181) discloses a system for distributing Internet content with means for distributing the content to a geographically distributed set of cache servers, each cache server serving a substantially different region wherein each region has a common relation (column 1, lines 35-38, 41-47; column 3, lines 22-26, 42-48).

Given the teaching of Greenwood et al. (USPN 5,568,181), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by employing the geographical

distribution of data. The purpose of the invention is to increase the performance for end users by putting information on a cache directly connected to them in their route to retrieve data. Geographically distributing data allows for the least amount of physical distance between the end user and the cache thus benefiting the system by further reducing retrieval time.

Further, a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying DeSimone et al. (USPN 5,787,470) by ignoring and forwarding any incoming messages that are not requests for content. This benefits the system by allowing it to operate only on the types of messages for which it is intended. Other network tasks are performed elsewhere.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Parton whose telephone number is (571)272-3958. The examiner can normally be reached on M-F 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (571)272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin Parton
Examiner
Art Unit 2153

ksp



CLAYTON B. BURGESS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100